

11. 2 p 586 <sup>15-23 odd 29, 33, 35, 40</sup> ~~15-23 odd 29, 33, 35, 40~~

$$S_n = \frac{n}{2}(a_1 + a_n)$$

$$15. S_8 = \frac{8}{2}(7 + 79)$$

4 · 86

$$(344)$$

$$S_n = \frac{n}{2}[2a_1 + (n-1)d]$$

$$17. S_{19} = \frac{19}{2}(43 + 115)$$

$$(1501)$$

$$19. S_n = \frac{9}{2}[2(7) + 8(-2)]$$

$$(-9)$$

23.

$$21. S_{13} = \frac{13}{2}[2(5) + 12(\frac{1}{2})]$$

16

$$(104)$$

$$-64 = a_1 + 20(-3)$$

-60

$$-4 = a_1$$

$$S_{21} = \frac{21}{2}(-4 + -64)$$

$$(-714)$$

$$27. a_1 = 1$$

$$a_2 = 3$$

$$a_3 = 5 \quad d = 2$$

$$100 = \frac{n}{2}[2(1) + (n-1)2]$$

$$2 + 2n - 2$$

$$\frac{n}{2} \cdot 2n$$

$$100 = n^2$$

$$10 = n$$

$$(10 \text{ Rows})$$

$$29$$

$$97 = 6 + (n-1)7$$

$$13 = n-1$$

$$14 = n$$

$$S_{14} = \frac{14}{2}(6 + 97)$$

$$(721)$$

$$33. \sum_{n=1}^6 (2n+1) \quad 13, 15$$

$$S_6 = \frac{6}{2} [2(13) + 5 \cdot 2]$$

36

108

$$35. \sum_{k=7}^{11} (42-9k) \quad a_7 = -21 \quad a_8 = -30$$

$d = -9$

$$S_5 = \frac{5}{2} (-21 + -57) \quad a_{11} = 42 - 9(11)$$

-57

-195

$$40. 3 + 6 + \dots + 999$$

$$999 = 3 + (n-1)3$$

$$332 = n-1$$

$$333 = n$$

$$S_{333} = \frac{333}{2} (3 + 999)$$

166,833